

Channel Mitigation Monitoring Sheets I, II, III, AND IV

Monitoring Data Record

Project Title: B-4191 (Br. No. 82 over Jacktown Creek on NC 226)
COE Action ID: SAW-2009-0707 DWQ Number: 20090385
Stream Name: Jacktown Creek
City, County and other Location Information: McDowell County, Bridge #82 over Jacktown Creek on NC Highway 226, approx. 0.2 miles south of I-40 adjacent to McDowell Technical Community College.
Date Construction Completed: 3/29/12 Monitoring Year: (4) of 5
Ecoregion: Eastern Blue Ridge Foothills 8 digit HUC unit 03050101
USGS Quad Name and Coordinates: Marion West 35.655352, -81.959133

Rosgen Classification: Proposed C Stream Type

Length of Project: 450' Urban or Rural: Rural Watershed Size: 1.28 sq. miles
Monitoring DATA collected by: M. Green & J. Elliott Date: 3/10/15
Applicant Information:

Name: NCDOT Roadside Environmental Unit
Address: 1425 Rock Quarry Road Raleigh, NC 27610
Telephone Number: (919) 861-3772 Email address: mlgreen@ncdot.gov

Consultant Information:

Name: _____
Address: _____
Telephone Number: _____ Email address: _____

Project Status: Complete

Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.): Level (1 2 3) 3

Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*

Permit States: (COE Permit Requirements): NCDOT will perform Level 1 monitoring of the stream following completion of restoration. Monitoring shall be performed twice annually (summer and winter) for each of a five year period, provided at least two bankfull events have occurred during this period. Monitoring activities shall consist of reference photos, plant survival determinations and visual inspection of stream stability.

(DWQ Permit Requirements): The permittee shall visually monitor the vegetative plantings to assess and ensure complete stabilization of the mitigation stream segments. The monitoring shall be conducted annually for a minimum of three (3) years after final planting. Photo documentation should be utilized to document the success of the riparian vegetation and the results submitted in a final report to DWQ within sixty (60) after completing the monitoring. After three (3) years a site visit shall be conducted by DWQ staff to "close out" the mitigation site.

Section 1. PHOTO REFERENCE SITES

(Monitoring at all levels must complete this section)

Total number of reference photo locations at this site:

6 photos were taken from 3 photo point locations and 1 overview photo

Dates reference photos have been taken at this site: 8/21/12, 1/9/13, 8/20/13, 1/15/14, 6/17/14, 3/10/15

Individual from whom additional photos can be obtained (name, address, phone): _____

Other Information relative to site photo reference: A site map with photo point locations is included with this report.

If required to complete Level 3 monitoring only stop here; otherwise, complete section 2.

Section 2. PLANT SURVIVAL

Attach plan sheet indicating reference photos.

Identify specific problem areas (missing, stressed, damaged or dead plantings):_____

Estimated causes, and proposed/required remedial action:_____

ADDITIONAL COMMENTS: Planted vegetation is surviving along the streambank and within the buffer area which included buttonbush and silky dogwood live stakes, sycamore, green ash, northern red oak and tulip poplar bareroot seedlings. NCDOT will continue to monitor plant survival.

If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

Section 3. CHANNEL STABILITY

Visual Inspection: The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

The Jacktown Creek stream restoration site is stable for the Year 4 Winter evaluation, except for left bank erosion at Sta. 12+50. A mid-channel bar was also observed at Sta. 11+00 but this area remains stable at this time. See the bankfull dates throughout the monitoring period below and how the bankfull events were noted. This site has met the bankfull requirement of two bankfull events must occur over the five year monitoring period. NCDOT will continue to monitor channel stability at the Jacktown Creek stream restoration site and look into remedial action possibilities to stabilize the left bank at Sta. 12+50.

Date 3/10/15	Sta. 11+00	Sta. 12+50	Station Number	Station Number	Station Number
Structure Type					
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?		Left bank erosion			
Other problems noted?	Mid-channel bar				

Bankfull event dates and how it was noted	8/21/12 Wrack Line	3/29/12 Wrack Line	8/20/13 Wrack Line	1/15/14 Wrack Line	5/7/14 Wrack Line
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Section 4. DEBIT LEDGER

In accordance with the permit conditions, 175 linear feet (at a 1:1 ratio) of the Jacktown Creek stream mitigation site was used to compensate for unavoidable stream impacts on the B-4191 project. The remaining 275 linear feet of mitigation credit will be considered an onsite asset and will be available as mitigation for future projects in the service area.

Jacktown Creek



Photo Point #1 (Upstream)



Photo Point #1 (Downstream)



Photo Point #2 (Upstream)



Photo Point #2 (Downstream)



Photo Point #3 (Upstream)



Photo Point #3 (Downstream)

Jacktown Creek



Sta. 11+00 (mid-channel bar)

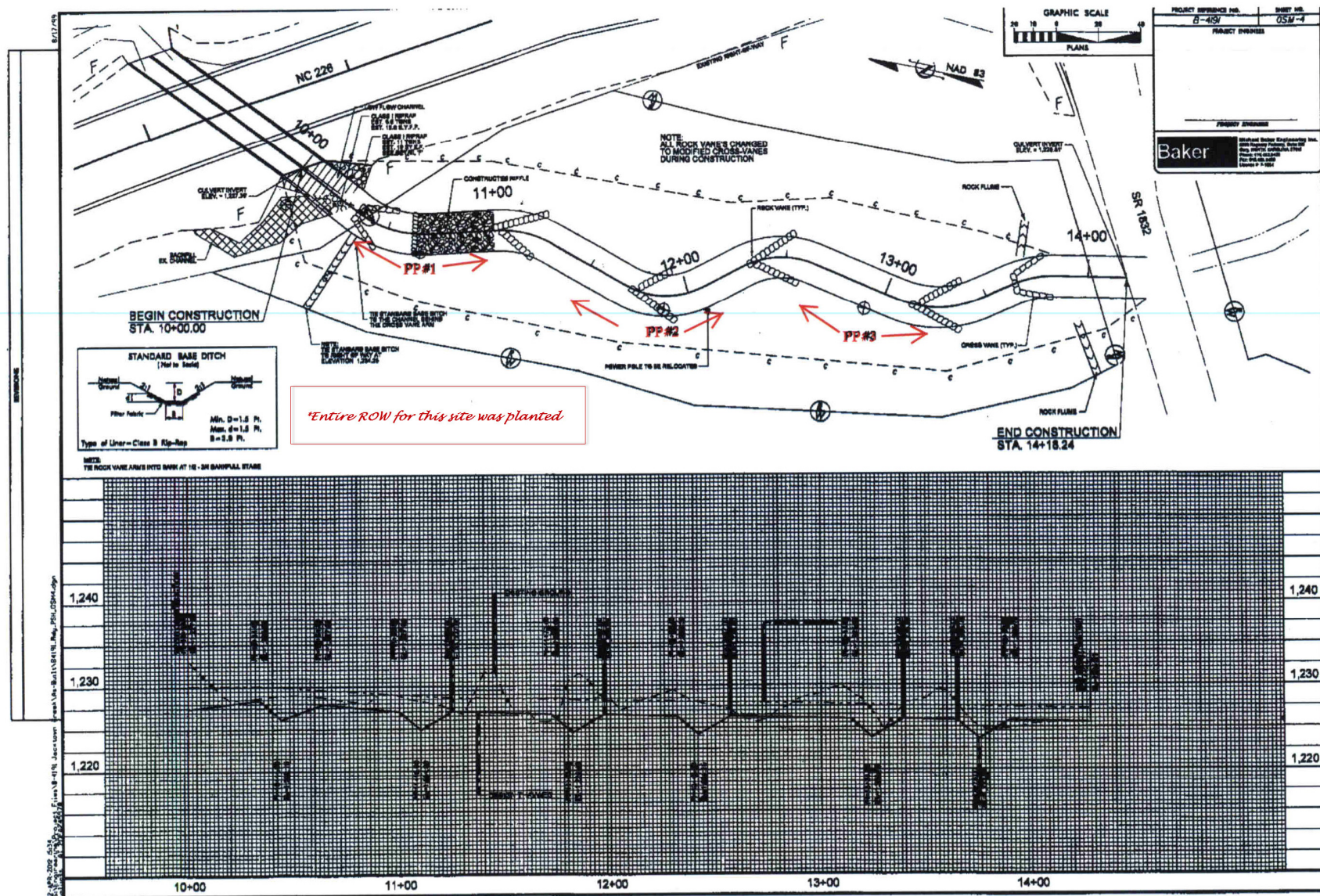


Sta. 12+50 (left bank erosion)



Overview Photo Looking Upstream from SR 1832

Year 4 Winter – March 2015





PROJECT VICINITY - B-4191
Jacktown Creek Mitigation Site
McDowell County, North Carolina

0 75 150 300 450 600
Feet

